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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/406,979	09/28/1999	KEVIN E. BREHMER	Z2002-700719	2142

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EXAMINER

MISLEH, JUSTIN P

ART UNIT

PAPER NUMBER

2612

DATE MAILED: 08/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/406,979

Applicant(s)

BREHMER ET AL.

Examiner

Justin P. Misleh

Art Unit

2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10, 14 - 20, 23 - 35, and 37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10, 14 - 20 and 23 - 35 is/are allowed.
- 6) ☒ Claim(s) 37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 September 1999 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on May 31, 2005 has been entered.

Response to Arguments

2. Applicant's arguments, filed May 31, 2005, with respect to Zarnowski et al. have been fully considered and are persuasive. The rejection of independent Claims 10, 20, 29, and 30 has been withdrawn. Albeit, Applicant's arguments with respect to new independent Claim 37 have been considered but are moot in view of the new grounds of rejection.

Claim Objections

3. **Claim 37** is objected to because of the following informalities: minor typographical errors.

On several occasions, the claim language recites, therein, "reference block" instead of "reference black". For the purposes of examination, all instances of "reference block" will be interpreted as "reference black". **Appropriate correction is required.**

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. **Claim 37** is rejected under 35 U.S.C. 102(e) as being anticipated by MacLean.

6. For **Claim 37** (please see objection above), MacLean discloses, as shown in figures 2 and 4 and as stated in column 1 (lines 47 – 65), a sampling circuit for an image sensor including a photosensitive component having a terminal carrying a photo signal alternately representative of incident light intensity and representative of a reference block intensity, comprising:

a sample and hold circuit (ALL of figure 4) having an input coupled to receive the photo signal and which alternately samples and holds on one storage element (memory 36) in a time sequence (see figure 2), a sample of the photo signal representative of incident light intensity (Image frames 1a, 1b, and 1c) and a sample of the photo signal representative of a reference block level (Dark frames 2a, 2b, and 2c); and

an output circuit (ALL of figure 4) which computes a difference between sequential input signals (CI 3a, 3b, and 3c), having an input coupled to receive from the sample and hold the time sequence of samples and having an output representative of a difference between the incident light intensity and the reference black level (see column 3, lines 57 – 67).

Allowable Subject Matter

7. **Claims 10, 14 – 20 and 23 – 35** are allowed.

8. The following is a statement of reasons for the indication of allowable subject matter:

- For **Independent Claims 10, 20, 29, and 30**, the closest prior art teaches, in the very least, an image sensing circuit comprising a plurality of pixels each having a photosensitive element and a differential input pair amplifier circuit, wherein a first input of the amplifier circuit is coupled to the output of the photosensitive element and an output of the amplifier circuit is coupled to an input of a correlated double sampling (CDS) circuit such that a feedback path is formed between the input of the CDS circuit to a second input of the amplifier circuit.

However, the closest prior art does not teach or fairly suggest wherein the CDS circuit is coupled within the amplifier feedback loop, wherein the CDS circuit comprises a sample and hold circuit, such that the output of the sample and hold circuit is fed back to the second input of the differential input pair of the amplifier circuit and the output of the sample and hold circuit is also coupled to an input of a subsequent clamping circuit.

- For **Independent Claims 16, 25, and 34**, the closest prior art teaches, in the very least, several different embodiments including a sampling circuit for an image sensing circuit having a photosensitive element, wherein the sampling circuit comprises a feedback loop amplifier circuit having an output from the photosensitive elements as input; and a clamping circuit coupled to receive an output from the feedback loop amplifier circuit and produce an output signal representing a double correlated sample voltage difference at the output, wherein said clamping circuit comprises an auto-zero amplifier circuit with a feedback loop which includes a first

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capacitive storage element coupled in parallel with a switching element controlled by a clamp signal.

However, the closest prior art does not teach or fairly suggest wherein the amplifier circuit of the clamping circuit has a first input coupled to a reference voltage and a second input coupled by way of a second capacitive element to receive said output from the feedback loop amplifier, and wherein said clamping circuit is controlled by a clamp signal such that in a first state the output of the clamping circuit amplifier is fixed by said reference voltage and in a second state the clamping circuit output changes in accordance with said feedback loop amplifier output from a baseline of the fixed reference voltage output.

Conclusion

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Justin P Misleh whose telephone number is 571.272.7313. The Examiner can normally be reached on Monday through Friday from 8:00 AM to 5:00 PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Thai Q Tran can be reached on 571.272.7382. The fax phone number for the organization where this application or proceeding is assigned is 571.273.3000.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JPM

August 22, 2005


THAI TRAN
PRIMARY EXAMINER